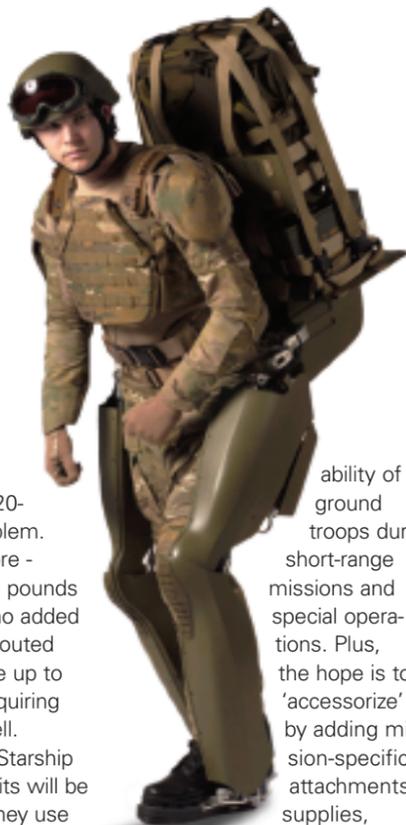


Marines SCUTTLEBUTT



Starship Trooper? Iron Man?
▼ Sigourney Weaver...

Want to kick butt like an alien-fighting forklift, fight off hordes of man-sized bugs, or lift tons at a time while capping off radiation beams? Well, we're not quite there, yet - but we're on our way, with new military technology called the exoskeleton.

The Exoskeletons for Human Performance Augmentation program from the Defense Advanced Research Projects Agency is making strides to put us in class with our morphing, red-eyed buds from the Terminator. The program's goal is to provide fully integrated machines that will increase the speed, strength, and endurance of

Marines in combat. Want to go on that 20-mile hump? No problem. But wait, there's more - tote along 125 more pounds on that hump with no added effort. The EHPA is touted to be able to operate up to 30 hours without requiring additional fuel as well.

As in the novel Starship Troopers, the exo-suits will be like a second skin. They use sensors to gauge the operator's movements, then move in continual and natural harmony over rough or smooth terrain, at tactically useful speeds. The result? Increased range, increased payload and increased lethality and surviv-

ability of ground troops during short-range missions and special operations. Plus, the hope is to 'accessorize' by adding mission-specific attachments, supplies, protective outer coverings, electronic systems, weapons, or instrumentation for medical support and surveillance. Maybe forced marches will become fun. We'll hold judgment on that one for now. **M**

Red capes and brightly colored spandex may soon be standard issue for infantry Marines on the battlefield - although the color of the tights is still undetermined. Marine Combat Development Command is fine-tuning its new concept for a "super squad" led by noncommissioned officers capable of synchronizing movement across an entire battlefield.

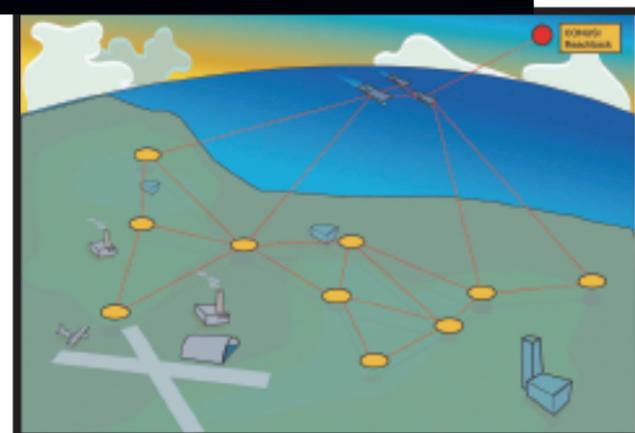
Coined Distributed Operations, the next evolution in Marine Corps warfighting will place greater command and control, situational awareness, mobility and flexibility in the hands of NCOs by providing gadgets that would make Batman want to enlist.

Laser range finders, thermal imagers and personal data assistance, equipped with

GPS, will combine with special training to allow NCOs to call for and direct fire from mortars, fixed-wing aircraft and, eventually, cruise missiles.

The concept uses new technology to enable squads to share real-time surveillance with one another, allowing decisions to be made quickly at the tip of the spear, while allowing commanders to track their units' progress down to the fire team level.

Developed from past experiments and experiences, Distributed Operations may soon have the Super Friends calling in the Marines to save



the day. Holy Baghdad, Batman! Is that an eagle, globe and anchor beacon in the sky? **M**

Move Over Super Friends ...
▼ Here Come the Marines

Changing a
▼ HUMVEE Tire 101



▲ Lance corporals Larry Conn and Christopher VanHoose pose for a "glamour shot" after breaking down and reassembling a radial tire for a High Mobility Multipurpose Wheeled Vehicle. Conn, 21 and VanHoose, 20, are members of The Basic School's Motor Transport Maintenance Platoon at Quantico, Va. Known by their co-workers as the "Dynamic Duo" the Marines are from Charleston, W.V., and Louisa Ky., respectively.

Photo by Gunnery Sgt. Glenn Holloway

"You may get proficient, but you'll never get fast." That's the way the Marines of Motor Transport Maintenance Platoon, at The Basic School speak of breaking down radial humvee tires. Though breaking down humvee tires is not part of the normal workday at the shop that provides 2nd and limited 3rd echelon maintenance for about 180 vehicles from TBS,

Officer Candidate School and the Communications Officer School aboard Marine Corps Base Quantico, Va., the Marines routinely break down 7-ton truck tires as part of their duties. **M**

NOTE: The tire should be placed in a tire inflation cage or similar area, capable of handling 150 percent of the blast if the tire explodes.



Step 1. Remove the valve core and deflate the tire. This is important to complete before proceeding to next step.



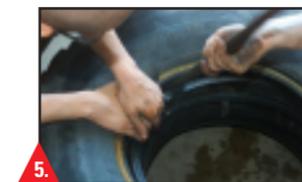
Step 2. Loosen locknuts that secure rim halves in a circular pattern. If you hear escaping air, STOP. Go back to step 2 and ensure tire is deflated. Removing locknuts from an inflated tire may separate you from certain parts of your anatomy, if it doesn't kill you.



Step 3. Remove outer rim half from the tire. Remove the O-ring from the insert and toss it. Do not try to save it, you'll just have to go back and break the tire down all over again - because it will leak.



Step 4. Remove tire from inner rim half.

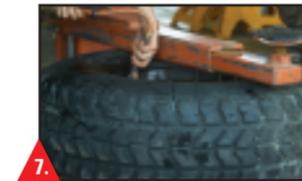


Step 5. Remove runflat spacers (hard rubber spacers that keep the hard rubber runflat in place).



Step 6. Lay tire flat, hook the runflat compressor strap around the runflat.

NOTE: The compressor is a beastly contraption that can make life much easier, or break you down instead of the tire. Follow the instructions in TM 9-2320-280-20-2 carefully. Swearing is optional.



Step 7. Compress the runflat and remove it.

Step 8. Installation is reverse. Inflate the tire and enjoy the ride.

How to Do a v Marine Corps Handshake

No, these Marines haven't just botched the Tango. They're showing the proper techniques for performing the leg sweep. The move is taught to all Marines who participate in the Marine Corps Martial Arts tan belt training. Marines without proper training should not try this at home.

Step 1. Staff Sgt. David Tomlinson assumes the "basic warrior stance." Tomlinson is a 3rd degree black belt instructor at the Martial Arts Center of Excellence at Marine Corps Base Quantico, Va. His opponent is Sgt. Trevor Wargo, a 1st degree black belt instructor at the MACE.



Step 2. Tomlinson advances upon Wargo, simultaneously grabbing Wargo's right wrist in his left hand and pushing Wargo's left shoulder with his right hand. This helps get the opponent off balance and make the entrance for the sweep easier.

Step 3. Tomlinson steps high with his right leg and brings it hard against Wargo's right leg. For training purposes the

Marines use a "calf-on-calf" technique to avoid injury. In combat, Marines should drive their boot heels into the Achilles tendon of their opponents, snapping the tendon, rendering the opponent's leg useless.

Step 4. Tomlinson uses the momentum gained by pushing, pulling and sweeping to throw his opponent to the ground.

Step 5. Tomlinson recovers to the basic warrior stance as Wargo hits the deck. In a real scenario, Wargo's leg should be severely damaged and Tomlinson could deliver a follow-on killing blow. **M**

NOTE: It is crucial that Marines practice calf-on-calf techniques when performing the leg sweep as well as proper break fall techniques. For more on the MCMAP programs available to you, see your training section.

Doing the 'Bloop' v Old Weapon Learns New Tricks



Thankfully, the M-79 doesn't make the sound "wooby-wooo" when fired, because that would be a stupid nickname for a grenade launcher. Instead it makes a distinctive "bloop" when fired, which is why Marines called it the "blooper" during the Vietnam War.

Now the M-79 is getting a second look as a possible low-tech solution for detonating the improvised explosive devices threatening Marines along the roadsides of Iraq. The blooper fires a 40 mm grenade that can "ka-boom" the IEDs Marines find from a safe distance of 200-300 meters.

Similar in range and accuracy to the M-203 grenade launcher that

replaced it after Vietnam, the blooper's real advantage is more of a psychological one for Marines firing it. Marines feel a bit more comfortable firing the blooper because it's a stand-alone weapon dedicated to one mission and feels more like a fat shotgun. In contrast, the M-203 is an attachment for the M-16 rifle that some consider awkward to fire.

"It's not a complicated weapon system at all," says Chief Warrant Officer 4 Rod N. Fiene, 1st Marine Division's ordinance officer. "Next to a single-shot shotgun, it's the simplest thing I've ever seen."

It seems the term "KISS" is alive and well in Iraq. **M**

Laser-guided Fun v Without the 'Bud-Dah'



No longer do you have to be a Trekkie to appreciate setting your phasers to stun. Today, you can get in on more than just Klingon action with the Multipurpose Integrated Laser Engagement System, or MILES-2000 for short. Considered essential for training Marines, this high-tech laser tag gear gives Marines a chance to conduct force-on-force training, without the nasty side-effect that live rounds have or the need to shout 'bud-dah, bud-dah, bud-dah' as you rush that next gun position.

MILES-2000 gear is available for every direct-fire weapon the Marine Corps employs with the exception of the 9 mm service pistol. Each weapon's optically safe laser is coded to fire an invisible beam with the same effective range as its host weapon. Meantime, shooters wear a vest and halo with sensors attached — picking up the laser signal from an

opponent's weapon. A digital readout panel attached to the vest tells the Marine if he was killed or will need Dr. McCoy's attention when 'tagged' by an opponent. The panel also displays the player ID number of the Marine who made the score — to help with tactics — and payback if necessary.

Along with the unique player ID, the updated MILES gear components are lighter, more accurate, and more durable; engagement data is recorded for after action review; there are reduced operation support costs; it's easier to install and align on weapons systems and, sadly, cheating is more difficult.

Look for similar training systems in the future that include capabilities like global positioning system devices or even ultra-wide band synthetic aperture radar that can detect targets through foliage, walls and soil. Phasers on stun? No, even better. **M**

SHORT COUNT

Three... Two... One...

800 – Containers of ice cream were shipped to Marine Wing Support Squadron 374 in Al Anbar, Iraq, for "Operation 31 Flavors."	2,056 – Flight hours spent in combat by Marine Fighter Attack Squadron 323 while aboard the USS Constellation for seven months during Operation Iraqi Freedom.	2,709 – Driving miles from Marine Corps Base Camp Pendleton, Calif., to Marine Corps Base Camp Lejeune, N.C., via I-40.
150 – Golfers who participated in the 12th annual MCRD/MCCS Golf Tournament in San Diego, May 21.	1 – Kidney donated by 1st Lt. Jeremy Duncan to a childhood friend in May.	26,000 – Dollars spent to build the Marine Barracks 8th and I, Washington, D.C., in 1801. It was open for business by 1804.
56 – Winning score of the golf tournament.	342 – Computers donated to local schools from MCRD Parris Island through the Computers for Learning program.	12 – Mounting studs/locknuts on the rim of a HMVEE wheel.
100 – Wild bison on Marine Corps Base Camp Pendleton.	38,000 – Cost of a Stinger missile.	1913 – The formal charter of the Marine Corps Association was established.